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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/552,371

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Hiroshi Yahata

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EXAMINER

DANG, HUNG Q

ART UNIT

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2621

MAIL DATE

DELIVERY MODE

09/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,371

Applicant(s)

YAHATA ET AL.

Examiner

Hung Q. Dang

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3. Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/07/2005, 02/10/2006, 03/29/2006, 07/05/2006, 06/07/2007, 08/02/2007.

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Nonfunctional descriptive material that does not constitute a statutory process, machine, manufacture or composition of matter and should be rejected under 35 U.S.C. Sec. 101. Certain types of descriptive material, such as music, literature, art, photographs, and mere arrangements or compilations of facts or data, without any functional interrelationship is not a process, machine, manufacture or composition of matter. USPTO personnel should be prudent in applying the foregoing guidance. Nonfunctional descriptive material may be claimed in combination with other functional descriptive multi-media material on a computer-readable medium to provide the necessary functional and structural interrelationship to satisfy the requirements of 35 U.S.C. Sec. 101. The presence of the claimed nonfunctional descriptive material is not necessarily determinative of nonstatutory subject matter. For example, a computer that recognizes a particular grouping of musical notes read from memory and upon recognizing that particular sequence, causes another defined series of notes to be played, defines a functional interrelationship among that data and the computing processes performed when utilizing that data, and as such is statutory because it implements a statutory process.

Claim 1 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows.

Claim 1 recites a "system stream" having a specific structure which does not impart functionality to a computer or computing device, and is thus considered nonfunctional descriptive material. Such nonfunctional descriptive material, in the absence of a functional interrelationship with a computer, does not constitute a statutory process, machine, manufacture or composition of matter and is thus non-statutory per se.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claim 1 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows.

Claim 1 defines some data structure on a recording medium. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "when functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed control information can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium"

Art Unit: 2621

or equivalent in order to make the claim statutory. Any amendment to the claim would be commensurate with its corresponding disclosure.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 6, and 11 are provisionally rejected on the ground of nonstatutory double patenting over claims 1, 2, and 3 of copending Application No. 11/594,161. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

Claim 1 of this application recites a recording medium for storing system stream including video elementary stream generated by encoding video information and audio elementary stream generated by encoding audio information with the video elementary stream and the audio elementary stream being multiplexed, wherein: the system stream

Art Unit: 2621

is allowed to have a first format (TS) and a second format (PS); the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segmented in packs, the pack is larger than the first packet in size; the first packet stores segmented second packet, the second packet stores video information and audio information and includes at least one audio frame; the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS), according to the constrained format: a predetermined number of first packets are grouped and managed as a multiplexing unit, and total data size of first packets managed in the multiplexing unit is smaller than size of the pack, and the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet.

Claim 1 of Application No. 11/594,161 recites a recording medium for storing system stream including video elementary stream generated by encoding video information and audio elementary stream generated by encoding audio information with the video elementary stream and the audio elementary stream being multiplexed, wherein: the system stream is allowed to have a first format (TS) and a second format (PS); the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segmented in packs, the pack is larger than the first packet in size; the first packet stores segmented second packet, the second packet stores video information and audio information and includes at least one audio frame; the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS),

Art Unit: 2621

according to the constrained format: a predetermined number of first packets are grouped and managed as a multiplexing unit, and total data size of first packets managed in the multiplexing unit is smaller than size of the pack, and the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet.

Claim 6 of this application recites an information recording apparatus for encoding video information and audio information to system stream and recording the system stream to a recoding medium, wherein: the system stream being allowed to have a first format (TS) and a second format (PS); the information recording apparatus comprising: a first encoding section operable to encode video information and audio information in a predetermined encoding manner according to the first format (TS) to generate video elementary stream and audio elementary stream; a second encoding section operable to perform system-encoding by multiplexing the video elementary stream and the audio elementary stream to generate the system stream according to the first format (TS); a control section operable to control the first encoding section and the second encoding section; the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS); wherein the control section controls the first and second encoding section so that each encoding is done according to the constrained format, and the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segmented in packs, the pack is larger than the first packet in size; the first packet stores segmented second packet, the second packets

stores video information and audio information and includes at least one audio frame, according to the constrained format, a predetermined number of first packets are grouped and managed as a multiplexing unit, and total data size of first packets managed in the multiplexing unit is smaller than data size of the pack, and the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet.

Claim 2 of Application No. 11/594161 recites an information recording apparatus for encoding video information and audio information to system stream and recording the system stream to a recoding medium, wherein: the system stream being allowed to have a first format (TS) and a second format (PS); the information recording apparatus comprising: a first encoding section operable to encode video information and audio information in a predetermined encoding manner according to the first format (TS) to generate video elementary stream and audio elementary stream; a second encoding section operable to perform system-encoding by multiplexing the video elementary stream and the audio elementary stream to generate the system stream according to the first format (TS); a control section operable to control the first encoding section and the second encoding section; the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS); wherein the control section controls the first and second encoding section so that each encoding is done according to the constrained format, and the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segmented in packs, the pack is larger than the first

packet in size; the first packet stores segmented second packet, the second packets stores video information and audio information and includes at least one audio frame, according to the constrained format, a predetermined number of first packets are grouped and managed as a multiplexing unit, and total data size of first packets managed in the multiplexing unit is smaller than data size of the pack, and the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet.

Claim 11 of this application recites an information recording method including encoding video information and audio information to system stream and recording the system stream to a recording medium, the system stream being allowed to have a first format (TS) and a second format (PS); the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS); the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segments in packs, the pack is larger than the first packet in size; the first packet stores segmented second packet, the second packet stores the video information and audio information and includes at least one audio frame; the information recording method comprising: encoding video information and audio information in a predetermined encoding method according to the constrained format (TS) to generate video elementary stream and audio elementary stream; performing system-encoding by multiplexing the video elementary stream and the audio elementary stream according to the constrained format (TS) to generate the system stream; and grouping and managing a

predetermined number of first packets as a multiplexing unit, wherein the total data size of the first packets managed in the multiplexing unit is smaller than data size of the pack, and the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet.

Claim 3 of Application No. 11/594161 recites an information recording method including encoding video information and audio information to system stream and recording the system stream to a recording medium, the system stream being allowed to have a first format (TS) and a second format (PS); the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS); the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segments in packs, the pack is larger than the first packet in size; the first packet stores segmented second packet, the second packet stores the video information and audio information and includes at least one audio frame; the information recording method comprising: encoding video information and audio information in a predetermined encoding method according to the constrained format (TS) to generate video elementary stream and audio elementary stream; performing system-encoding by multiplexing the video elementary stream and the audio elementary stream according to the constrained format (TS) to generate the system stream; and grouping and managing a predetermined number of first packets as a multiplexing unit, wherein the total data size of the first packets managed in the multiplexing unit is smaller than data size of the

pack, and the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet.

It is noted that the claims 1, 6, and 11 of this application are broader thus encompass the claims 1-3 of Application No. 11/594161.

Claims 1, 6, and 11 are provisionally rejected on the ground of nonstatutory double patenting over claims 1, 2, and 3 of copending Application No. 11/594,137. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

Claim 1 of this application recites a recording medium for storing system stream including video elementary stream generated by encoding video information and audio elementary stream generated by encoding audio information with the video elementary stream and the audio elementary stream being multiplexed, wherein: the system stream is allowed to have a first format (TS) and a second format (PS); the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segmented in packs, the pack is larger than the first packet in size; the first packet stores segmented second packet, the second packet stores video information and audio information and includes at least one audio frame; the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS), according to the constrained format: a predetermined number of first packets are grouped and managed as a multiplexing unit, and total data size of first packets managed in the multiplexing unit is

smaller than size of the pack, and the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet.

Claim 1 of Application No. 11/594,137 recites a recording medium for storing system stream including video elementary stream generated by encoding video information and audio elementary stream generated by encoding audio information with the video elementary stream and the audio elementary stream being multiplexed, wherein: the system stream is allowed to have a first format (TS) and a second format (PS); the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segmented in packs, the pack is larger than the first packet in size; the first packet stores segmented second packet, the second packet stores video information and audio information and includes at least one audio frame; the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS), according to the constrained format: a predetermined number of first packets are grouped and managed as a multiplexing unit, and total data size of first packets managed in the multiplexing unit is smaller than size of the pack, and the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet.

Claim 6 of this application recites an information recording apparatus for encoding video information and audio information to system stream and recording the system stream to a recoding medium, wherein: the system stream being allowed to have a first format (TS) and a second format (PS); the information recording apparatus

comprising: a first encoding section operable to encode video information and audio information in a predetermined encoding manner according to the first format (TS) to generate video elementary stream and audio elementary stream; a second encoding section operable to perform system-encoding by multiplexing the video elementary stream and the audio elementary stream to generate the system stream according to the first format (TS); a control section operable to control the first encoding section and the second encoding section; the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS); wherein the control section controls the first and second encoding section so that each encoding is done according to the constrained format, and the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segmented in packs, the pack is larger than the first packet in size; the first packet stores segmented second packet, the second packets stores video information and audio information and includes at least one audio frame, according to the constrained format, a predetermined number of first packets are grouped and managed as a multiplexing unit, and total data size of first packets managed in the multiplexing unit is smaller than data size of the pack, and the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet.

Claim 2 of Application No. 11/594137 recites an information recording apparatus for encoding video information and audio information to system stream and recording the system stream to a recoding medium, wherein: the system stream being allowed to

Art Unit: 2621

have a first format (TS) and a second format (PS); the information recording apparatus comprising: a first encoding section operable to encode video information and audio information in a predetermined encoding manner according to the first format (TS) to generate video elementary stream and audio elementary stream; a second encoding section operable to perform system-encoding by multiplexing the video elementary stream and the audio elementary stream to generate the system stream according to the first format (TS); a control section operable to control the first encoding section and the second encoding section; the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS); wherein the control section controls the first and second encoding section so that each encoding is done according to the constrained format, and the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segmented in packs, the pack is larger than the first packet in size; the first packet stores segmented second packet, the second packets stores video information and audio information and includes at least one audio frame, according to the constrained format, a predetermined number of first packets are grouped and managed as a multiplexing unit, and total data size of first packets managed in the multiplexing unit is smaller than data size of the pack, and the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet.

Claim 11 of this application recites an information recording method including encoding video information and audio information to system stream and recording the

system stream to a recording medium, the system stream being allowed to have a first format (TS) and a second format (PS); the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format (TS) to the second format (PS); the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segments in packs, the pack is larger than the first packet in size; the first packet stores segmented second packet, the second packet stores the video information and audio information and includes at least one audio frame; the information recording method comprising: encoding video information and audio information in a predetermined encoding method according to the constrained format (TS) to generate video elementary stream and audio elementary stream; performing system-encoding by multiplexing the video elementary stream and the audio elementary stream according to the constrained format (TS) to generate the system stream; and grouping and managing a predetermined number of first packets as a multiplexing unit, wherein the total data size of the first packets managed in the multiplexing unit is smaller than data size of the pack, and the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet.

Claim 3 of Application No. 11/594137 recites an information recording method including encoding video information and audio information to system stream and recording the system stream to a recording medium, the system stream being allowed to have a first format (TS) and a second format (PS); the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format

(TS) to the second format (PS); the first format (TS) has a structure for storing data segmented in first packets, the second format (PS) has a structure for storing data segments in packs, the pack is larger than the first packet in size; the first packet stores segmented second packet, the second packet stores the video information and audio information and includes at least one audio frame; the information recording method comprising: encoding video information and audio information in a predetermined encoding method according to the constrained format (TS) to generate video elementary stream and audio elementary stream; performing system-encoding by multiplexing the video elementary stream and the audio elementary stream according to the constrained format (TS) to generate the system stream; and grouping and managing a predetermined number of first packets as a multiplexing unit, wherein the total data size of the first packets managed in the multiplexing unit is smaller than data size of the pack, and the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet.

It is noted that the claims 1, 6, and 11 of this application are broader thus encompass the claims 1-3 of Application No. 11/594137.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 6, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naimpally (US Patent 5,619,337) and Oishi et al. (US Patent 6,141,490).

Regarding claim 1, Naimpally discloses a recording medium for storing system stream including video elementary stream generated by encoding video information and audio elementary stream generated by encoding audio information with the video elementary stream and the audio elementary stream being multiplexed (Fig. 1B; column 5, lines 31-62), wherein: the system stream is allowed to have a first format (TS) (column 5, lines 31-62; column 6, line 48 – column 7, line 9; Fig. 3C) and a second format (PS) (column 6, lines 27-47; Fig. 3A); the first format (TS) has a structure for storing data segmented in first packets ("P0 tp1", "P0 tp2", and "P0 tp3" in Fig. 3C; column 6, line 64 – column 7, line 2), the second format (PS) has a structure for storing data segmented in packs (packs "P0, P1, and P2" in Fig. 3A), the pack is larger than the first packet in size (Fig. 3C; pack P0 contains packets "P0 tp1", "P0 tp2", and "P0 tp3" and other information "TS" and "TCL"). Also Naimpally discloses the first format (TS) is allowed to have a constrained format used for converting the second format to the first format (Fig. 3A; Fig. 3B; and Fig. 3C), according to the constrained format: a predetermined number of first packets are grouped and managed as a multiplexing unit (Fig. 3C), and total data size of first packets managed in the multiplexing unit is smaller than data size of the pack (Fig. 3C; pack P0 contains packets "P0 tp1", "P0 tp2", and "P0 tp3" and other information "TS" and "TCL").

However, Naimpally does not disclose the first packet stores segmented second packet, and the second packet stores video information and audio information and includes at least one audio frame; the constrained format used for converting the system stream from the first format (TS) to the second format (PS); according to the constrained format: the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet.

Oishi et al. discloses a recording medium having thereon MPEG video stream data (column 3, lines 22-31), in which the first packet stores segmented second packet (first packet corresponds to “pack” in Fig. 2; second packet corresponds to “packet (video)” or “packet (audio)” in Fig. 2;), and the second packet stores video information and audio information and includes at least one audio frame (Fig. 2); the first format (TS) is allowed to have a constrained format used for converting the system stream from the first format to the second format (column 1, line 60 – column 2, line 15; column 15, line 66 – column 16, line 15); according to the constrained format: the first one of complete audio frames in the multiplexing unit is the first one of audio frames in a payload of the second packet (Fig. 2).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the first packet structure with respect to the second packet structure, the second packet structure with respect to the video frames and audio frames together with the constrained format used for converting the system stream from the first format to the second format and the structure of the constrained format with respect to the audio frames as disclosed by Oishi et al. into the recording

Art Unit: 2621

medium disclosed by Naimpally to conform to MPEG standards. The incorporated features would enhance the compatibility of the recording medium with popular existing standards such as MPEG.

Claim 6 is rejected as discussed in claim 1 above.

Claim 11 is rejected as discussed in claim 1 above.

Conclusion

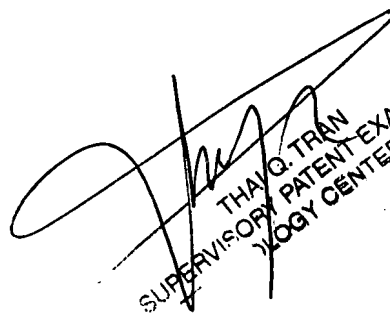
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Q. Dang whose telephone number is 571-270-1116. The examiner can normally be reached on M-Th:7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2621

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hung Dang
Patent Examiner



THANH Q. TRAN
SUPERVISORY PATENT EXAMINER
EBC CENTER 2600